Napat Vajragupta

List of Publications by Year
in descending order

36	588	687363 13	610901 24
papers	citations	h-index	g-index

37	37	37	534
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	A micromechanical damage simulation of dual phase steels using XFEM. Computational Materials Science, 2012, 54, 271-279.	3.0	125
2	The second Sandia Fracture Challenge: predictions of ductile failure under quasi-static and moderate-rate dynamic loading. International Journal of Fracture, 2016, 198, 5-100.	2.2	73
3	A method to quantitatively upscale the damage initiation of dual-phase steels under various stress states from microscale to macroscale. Computational Materials Science, 2014, 94, 245-257.	3.0	56
4	Modeling Macroscopic Material Behavior With Machine Learning Algorithms Trained by Micromechanical Simulations. Frontiers in Materials, 2019, 6, .	2.4	43
5	The modeling scheme to evaluate the influence of microstructure features on microcrack formation of DP-steel: The artificial microstructure model and its application to predict the strain hardening behavior. Computational Materials Science, 2014, 94, 198-213.	3.0	36
6	Modeling the microstructure influence on fatigue life variability in structural steels. Computational Materials Science, 2014, 94, 258-272.	3.0	23
7	Prediction of plasticity and damage initiation behaviour of C45E + N steel by micromechanical modelling. Materials and Design, 2017, 121, 154-166.	7.0	23
8	Indentation size effects in spherical nanoindentation analyzed by experiment and non-local crystal plasticity. Materialia, 2018, 3, 21-30.	2.7	19
9	Kanapy: A Python package for generating complex synthetic polycrystalline microstructures. Journal of Open Source Software, 2019, 4, 1732.	4.6	18
10	Optimized reconstruction of the crystallographic orientation density function based on a reduced set of orientations. Journal of Applied Crystallography, 2020, 53, 178-187.	4.5	16
11	Micromechanical modeling approach to derive the yield surface for BCC and FCC steels using statistically informed microstructure models and nonlocal crystal plasticity. Physical Mesomechanics, 2017, 20, 343-352.	1.9	15
12	Influence of Microstructural Features on the Strain Hardening Behavior of Additively Manufactured Metallic Components. Advanced Engineering Materials, 2019, 21, 1900275.	3.5	15
13	Studying Grain Boundary Strengthening by Dislocation-Based Strain Gradient Crystal Plasticity Coupled with a Multi-Phase-Field Model. Materials, 2019, 12, 2977.	2.9	14
14	Parameterization of a Non-local Crystal Plasticity Model for Tempered Lath Martensite Using Nanoindentation and Inverse Method. Frontiers in Materials, 2019, 6, .	2.4	12
15	Influence of Trapped Gas on Pore Healing under Hot Isostatic Pressing in Nickel-Base Superalloys. Crystals, 2020, 10, 1147.	2.2	12
16	Robust Optimization Scheme for Inverse Method for Crystal Plasticity Model Parametrization. Materials, 2020, 13, 735.	2.9	12
17	The influence of post-weld tempering temperatures on microstructure and strength in the stir zone of friction stir welded reduced activation ferritic/martensitic steel. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2021, 814, 141224.	5.6	10
18	Effect of microstructure heterogeneity on the mechanical properties of friction stir welded reduced activation ferritic/martensitic steel. Scripta Materialia, 2022, 207, 114306.	5.2	10

#	Article	IF	Citations
19	Influence of Pore Characteristics on Anisotropic Mechanical Behavior of Laser Powder Bed Fusionâ€“Manufactured Metal by Micromechanical Modeling. Advanced Engineering Materials, 2020, 22, 2000641.	3.5	9
20	Fracture properties of zinc coating layers in a galvannealed steel and an electrolytically galvanized steel. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2018, 732, 320-325.	5.6	7
21	Effect of Grain Statistics on Micromechanical Modeling: The Example of Additively Manufactured Materials Examined by Electron Backscatter Diffraction. Advanced Engineering Materials, 2020, 22, 1901416.	3.5	5
22	Finite Element Modeling of Brittle and Ductile Modes in Cutting of 3C-SiC. Crystals, 2021, 11, 1286.	2.2	5
23	Micromechanical Modeling of DP600 steel: From Microstructure to The Sheet Metal Forming Process. Procedia Manufacturing, 2020, 47, 1540-1547.	1.9	4
24	Deformation and Damage Assessments of Two DP1000 Steels Using a Micromechanical Modelling Method. Crystals, 2021, 11, 805.	2.2	4
25	Towards prediction of springback in deep drawing using a micromechanical modeling scheme. Procedia Engineering, 2017, 207, 60-65.	1.2	3
26	Understanding of residual stresses in chain-die-formed dual-phase (DP) metallic components: predictive modelling and experimental validation. International Journal of Advanced Manufacturing Technology, 2019, 103, 3337-3360.	3.0	3
27	Influence of Temperature on Void Collapse in Single Crystal Nickel under Hydrostatic Compression. Materials, 2021, 14, 2369.	2.9	3
28	Evaluation of the Cold Formability of Multiphase Steels by Damage Mechanics Approachesâˆ—. Materialpruefung/Materials Testing, 2013, 55, 628-635.	2.2	3
29	Modeling the Cold Formability of Dualphase Steels on Different Length Scales. , 2014, 3, 1050-1055.		2
30	The Second Blind Sandia Fracture Challenge: improved MBW model predictions for different strain rates. International Journal of Fracture, 2016, 198, 149-165.	2.2	2
31	Influence of Crystal Plasticity Parameters on the Strain Hardening Behavior of Polycrystals. Crystals, 2021, 11, 1473.	2.2	2
32	Data-oriented description of texture-dependent anisotropic material behavior. Modelling and Simulation in Materials Science and Engineering, 2022, 30, 065001.	2.0	2
33	Micromechanical Modeling of Damage and Failure in Dual Phase Steels. Key Engineering Materials, 0, 554-557, 2369-2374.	0.4	1
34	Identification of texture characteristics for improved creep behavior of a L-PBF fabricated IN738 alloy through micromechanical simulations. Modelling and Simulation in Materials Science and Engineering, 2022, 30, 055007.	2.0	1
35	A comparative study of an isotropic and anistropic model to describe the microâ€indentation of TWIP steel. Proceedings in Applied Mathematics and Mechanics, 2021, 20, e202000224.	0.2	0
36	A Numerical Study on the Mechanical Properties and the Processing Behaviour of Composite High Strength Steels. Materialpruefung/Materials Testing, 2013, 55, 336-344.	2.2	0